

Patent Claims

1. Immersion nozzle for a metallurgic vessel arranged upstream of a casting device, in particular a continuous casting mold or a twin roller, in which a slit-shaped pour-out opening (2) having a length that is several times greater than its width is provided in the base area, characterized in that its cross section widens in the direction of its mouth from a round inlet cross section to a mouth cross section whose one semiaxis is smaller than, and whose other semiaxis extending perpendicular thereto is greater than, the semiaxis of the round inlet cross section and whose base shape corresponds to that of the body of revolution of an ellipse or of an oval mouth cross section around the greater semiaxis, and in that the slit-shaped outlet opening extends in direction of the greater semiaxis.

2. Immersion nozzle according to claim 1, characterized in that the mouth cross section has the shape of an ellipse.

3. Immersion nozzle according to claim 1, characterized in that the mouth cross section has the shape of a rhombus.

4. Immersion nozzle according to claim 1, characterized in that the mouth cross section has a shape combining a round cross section and ellipse-like cross section.

5. Immersion nozzle according to one of the preceding claims, characterized in that the base of the mouth cross section extends in an arc-shaped manner in direction of the smaller semiaxis.

6. Immersion nozzle according to one of the preceding claims, characterized in that the base of the mouth cross section extends in an arc-shaped manner in direction of the greater semiaxis.

7. Immersion nozzle according to one of the preceding claims, characterized in that the transition from the circular cross section to the widened cross section is formed as a function of the first degree.

8. Immersion nozzle according to one of the preceding claims, characterized in that the transition from the circular cross section to the widened cross section is formed as a function of the n th degree.

9. Immersion nozzle according to one of the preceding claims, characterized in that the slit-shaped pour-out opening (2) extends over the length of the entire base area.

10. Immersion nozzle according to claim 9, characterized in that the slit-shaped pour-out opening (2) extends in the side wall.

11. Immersion nozzle according to one of the preceding claims, characterized in that the shape of the slit-shaped pour-out opening (2) corresponds to a rectangle.

12. Immersion nozzle according to one of the preceding claims, characterized in that the width of the pour-out opening increases outward from the center.